

ZMATH 2009e.00498

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Parabolas under pressure.

Math. Teach. (Reston) 102, No. 9, 660-665 (2009).

Summary: The author and his first-year algebra students explored the quadratic behavior behind the parabolic shape of fountains at the local family splash park. This hands-on discovery project has three main parts: (1) gathering data by experimenting with and photographing the fountains; (2) analyzing the photographs to obtain numerical data; and (3) creating and fitting appropriate quadratic equations to the data. This experience could easily serve as a capstone project for a unit on quadratic equations. (Contains 8 figures and 1 table.) (ERIC)

Classification: I23 H33 U53 D43

Keywords: graphing calculators; elementary algebra; experiential learning; discovery learning; photography; data analysis; equations; geometric concepts; high school students; secondary school mathematics